

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: D'Evelyn et al.  
Title: **GROUP III-NITRIDE BASED RESONANT CAVITY LIGHT  
EMITTING DEVICES FABRICATED ON SINGLE CRYSTAL  
GALLIUM NITRIDE SUBSTRATES**  
Serial No.: Unknown  
Art Unit: Unknown  
Filing Date: Herewith  
Attorney Docket No.: 132852-1  
GCRZ 2 00025  
Date: October 24, 2003

INFORMATION DISCLOSURE STATEMENT

MAIL STOP PATENT APPLICATION

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The following are submitted in the above application in compliance with 37 CFR 1.97 and 37 CFR 1.98.

- [ X ] 1. A list of documents on Form PTO-1449 or Substitute together with copies of each identified document, and a translation thereof or a concise explanation of each non-English language document or a Search Report or communication from a non-US patent office or an International Search Report from an International Searching Authority for a patent application filed via the Patent Cooperation Treaty or document(s) cited in the application or the priority application.

This paper is submitted in accordance with:

- [ X ] 2. 37 CFR 1.97(b): [within three months of national, non-CPA filing, prior to first Office Action, on the merits, or prior to first office action after filing an RCE]

- [ ] 3. 37 CFR 1.97(c): [before Final Office Action, Allowance, or other action closing prosecution, whichever is earlier]; and

[ ] a. The required Certification made in item 5 below; or

[ ] b. The \$180.00 fee specified in 37 CFR 1.17(p) for submission of this Information Disclosure Statement is authorized in item 6 below.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as EXPRESS MAIL in an envelope numbered EL 998013310 US addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date indicated below.

By George B. George  
George B. George

Date: 10/24/03

☐ 4. 37 CFR 1.97(d): [on or before issue fee payment]; and

- a) The required Certification is stated in item 5 below; and
- b) The \$180.00 fee specified in 37 C.F.R. 1.17(p) for submission of this Information Disclosure Statement is authorized in item 6 below.

☒ 5. Certification

- ☐ a. Each item of information contained in this Statement was first cited in any communication from a foreign patent office in a counterpart foreign patent application not more than three months prior to the filing of this Statement; or
- ☒ b. No item of information contained in this Statement was cited in a communication from a foreign patent office in a counterpart foreign patent application and, to the knowledge of the person signing this document after making reasonable inquiry, no item of information contained in this Statement was known to any individual designated in 37 CFR 1.56(c) more than three (3) months prior to the filing date of this Statement.

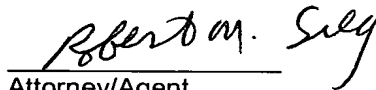
☒ 6. Payment of all applicable fees:

- Please charge all applicable fees associated with the submittal of this Information Disclosure Statement to Deposit Account No. 06-0308.
- Enclosed is a check in the amount of \$\_\_\_\_\_ in payment of all applicable fees associated with the submittal of this Information Disclosure Statement.

This document is submitted in duplicate.

Respectfully submitted,

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Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT(S)</b>	<b>Complete if Known</b>	
	Application Number	Unknown
	Filing Date	Herewith
	First Named Inventor	D'Evelyn
	Art Unit	Unknown
Examiner Name	Unknown	
Sheet 1 of 3	Attorney Docket No.	132852-1/GCRZ 2 00025

### U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.	Document No. Number-Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA	US-5,578,839	11-26-1996	Nakamura et al.	
	AB	US-5,637,531	06-10-1997	Porowski et al.	
	AC	US-5,770,887	06-23-1998	Tadatomo et al.	
	AD	US-5,796,771	08-18-1998	DenBaars et al.	
	AE	US-5,810,925	09-22-1998	Tadatomo et al.	
	AF	US-5,838,707	11-17-1998	Ramdani et al.	
	AG	US-5,874,747	02-23-1999	Redwing et al.	
	AH	US-5,877,038	03-02-1999	Coldren et al.	
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	AJ	US-5,977,612	11-02-1999	Bour et al.	
	AK	US-6,015,979	01-18-2000	Sugiura et al.	
	AL	US-6,031,858	02-29-2000	Hatakoshi et al.	

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Examiner Initials*	Cite No.	Foreign Patent Document Country Code-Number Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
	AM	PCT - WO 01/37351 A1	05-25-2001	Cree Lighting Co.		<input type="checkbox"/>
	AN	PCT - WO 01/24285 A1	04-05-2001	Lumileds Lighting U.S. LLC		<input type="checkbox"/>
	AO					<input type="checkbox"/>
	AP					<input type="checkbox"/>

### OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T
	AQ	KAMP et al., GaN Homoepitaxy for Device Applications, Kamp et al., MRS Internet J. Nitride Semicond. Res. 4SI, G10.2 (1999)	<input type="checkbox"/>
	AR	FINI et al. <i>In situ</i> , Real-Time Measurement of Wing Tilt During Lateral Epitaxial Overgrowth of GaN; Applied Physics Letters, Volume 76, Number 26, June 26, 2000	<input type="checkbox"/>
	AS	PELZMANN et al., Blue Light-Emitting Diodes on GaN Substrates, Growth and Characterization, Journal of Crystal Growth 189/190 (1998) 167-171	<input type="checkbox"/>
	AT	POROWSKI, High Pressure of Crystallization of III-V Nitrides, ACTA Physica Polonica A, Vol. 87 (1995), No. 2	<input type="checkbox"/>
	AU	KIM et al. Crystal tilting in GaN Grown by Pendoepitaxy Method on Sapphire Substrate, Applied Physics Letters, Volume 75, Number 26, December 27, 1999	<input type="checkbox"/>
	AV	KUAN et al., Dislocation Mechanisms in the GaN Lateral Overgrowth by Hydride Vapor Phase Epitaxy	<input type="checkbox"/>

Examiner Signature		Date Considered	
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	BA	US-6,100,586	08-08-2000	Chen et al.	
	BB	US-6,140,669	10-31-2000	Lozykowski et al.	
	BC	US-6,160,833	12-12-2000	Floyd et al.	
	BD	US-6,255,669	07-03-2001	Birkhahn et al.	
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	BI	US-6,339,014	01-15-2002	Ishida et al.	
	BJ	US-6,398,867	06-04-2002	D'Evelyn et al.	
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	BL	US-6,504,180	01-07-2003	Heremans et al.	

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		Country Code-Number Kind Code (if known)				
	BM					<input type="checkbox"/>
	BN					<input type="checkbox"/>
	BO					<input type="checkbox"/>
	BP					<input type="checkbox"/>

**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T
	BQ	SAKAI et al., Transmission Electron Microscopy of Defects in GaN Films Formed by Epitaxial Lateral Overgrowth, Applied Physics Letters, Volume 73, Number 4, July 27, 1998	<input type="checkbox"/>
	BR	MARCHAND et al., Microstructure of GaN Laterally Overgrown by Metalorganic Chemical Vapor Deposition, Applied Physics Letters, Volume 73, Number 6, August 10, 1998	<input type="checkbox"/>
	BS	HORIBUCHI et al., Behavior of Threading Dislocations in SAG-GaN Grown by MOVPE, phys. Stat. sol. (a) 180, 171 (2000)	<input type="checkbox"/>
	BT	Patent Abstract of Japan, Publication No. 2000-022212, Date 21.01.2000	<input type="checkbox"/>
	BU	D'EVELYN et al., Homoepitaxial Gallium-Nitride-Based Light Emitting Device and Method for Producing, U.S. Application Serial No. 09/694,690; Filed October 23, 2000	<input type="checkbox"/>
	BV	D'EVELYN et al., Gallium Nitride Crystal and Method of Making Same; U.S. Application Serial No. 10/329,981	<input type="checkbox"/>

Examiner Signature		Date Considered	
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	First Named Inventor	D'Evelyn
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Sheet 3 of 3	Attorney Docket No.	132852-1/GCRZ 2 00025

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	CA	6,507,042	01-14-2003	Mukai et al.	
	CB	6,515,308	02-04-2003	Kneissl et al.	
	CC	US2002/0155634	10-24-2002	D'Evelyn et al.	
	CD	US2002/0140845	07-31-2003	D'Evelyn et al.	
	CE	US2003/0141301	07-31-2003	D'Evelyn et al.	
	CF	US2003/0183155	10-02-2003	D'Evelyn et al.	
	CG				
	CH				
	CI				
	CJ				
	CK				
	CL				

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		Country Code-Number Kind Code (if known)				
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	CO					<input type="checkbox"/>
	CP					<input type="checkbox"/>

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS				
Examine r Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published		T
	CQ			<input type="checkbox"/>
	CR			<input type="checkbox"/>
	CS			<input type="checkbox"/>
	CT			<input type="checkbox"/>
	CU			<input type="checkbox"/>
	CV			<input type="checkbox"/>

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